

PROJECT DESCRIPTION

GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE INSTALLATION OF APS (AUDIBLE PEDESTRIAN SIGNALS) AND VIDEO DETECTION FOR THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 410 (BURLINGTON AVE./PHILADELPHIA AVE.) AND FENTON STREET IN MONTGOMERY COUNTY, MARYLAND. MD 410 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 410 APPROACHES OPERATING CONCURRENTLY AND THE FENTON STREET APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR THE EASTBOUND MD 410 APPROACH AND THE SOUTHBOUND FENTON STREET APPROACH.

AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS BOTH LEGS OF MD 410 AND PEDESTRIAN INDICATIONS ARE PROVIDED ACROSS BOTH LEGS OF FENTON STREET.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

MD 410 (BURLINGTON AVE) AND FENTON STREET - WEST LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS BURLINGTON AT FENTON, WAIT." *

WALK: RAPID TICK

MD 410 (PHILADELPHIA AVE) AND FENTON STREET - EAST LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS PHILADELPHIA AT FENTON, WAIT." *

WALK: RAPID TICK

FENTON STREET AND MD 410 (BURLINGTON AVE/PHILADELPHIA AVE) - NORTH LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS FENTON AT BURLINGTON AND PHILADELPHIA, WAIT." *

WALK: RAPID TICK

FENTON STREET AND MD 410 (BURLINGTON AVE/PHILADELPHIA AVE) - SOUTH LEG

INTERSECTION WITH ANGLED CROSSING

WAIT: "WAIT TO CROSS FENTON AT BURLINGTON AND PHILADELPHIA. CROSSWALK ANGLES RIGHT, WAIT." **

WALK: RAPID TICK

* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPENDICULAR CROSSING IS < 10'

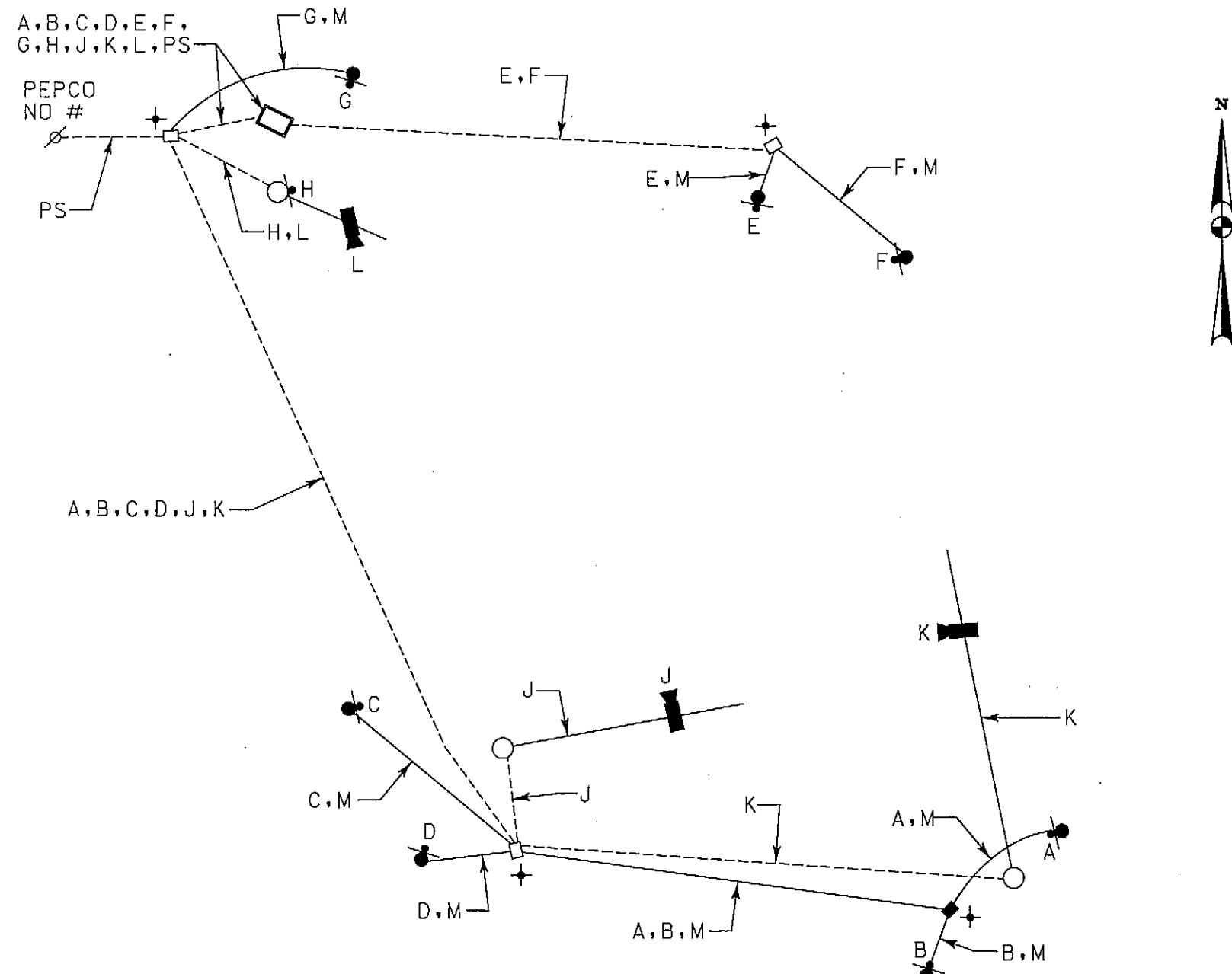
** MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE ARE TO BE APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

CONTROLLER REQUIREMENTS

THE EXISTING BASE MOUNTED CABINET AND CONTROLLER WILL BE USED. THE CONTROLLER WILL BE RETROFITTED TO OPERATE VIDEO DETECTION EQUIPMENT AND APS EQUIPMENT.

WIRING DIAGRAM



WIRING KEY

2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
PS - EXISTING POWER SOURCE
+ - 3/4 IN. X 10 FT. GROUND ROD
VIDEO CAMERA DETECTION LEAD-IN CABLE

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

CAT. CODE	QUANTITY	DESCRIPTION
900000	1 EACH	VIDEO INTERFACE EQUIPMENT: 1-8 CAMERAS
973022	22 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF (GROUND MOUNT) : - 2 EACH W11-2 (36 IN. x 36 IN.) B/FY - GROUND MOUNT - 2 EACH W16-7p (24 IN. x 12 IN.) B/FY - GROUND MOUNT
973023	76 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF (POLE MOUNT) : - 1 EACH M1-5(6) ASSOCIATED SHIELD ASSEMBLY "EAST, MD 410, RIGHT ARROW" (24 IN. x 48 IN.) - POLE MOUNT - 1 EACH M1-5(6) ASSOCIATED SHIELD ASSEMBLY "WEST, MD 410, LEFT ARROW" (36 IN. x 72 IN.) - POLE MOUNT - 1 EACH M1-5(6) ASSOCIATED SHIELD ASSEMBLY "WEST, MD 410, RIGHT ARROW" (24 IN. x 48 IN.) - POLE MOUNT - 1 EACH M1-5(6) ASSOCIATED SHIELD ASSEMBLY "EAST, MD 410, LEFT ARROW" (36 IN. x 72 IN.) - POLE MOUNT - 4 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS FENTON STREET" - 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS BURLINGTON AVE." - 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS PHILADELPHIA AVE"

EQUIPMENT LIST "C"

NO EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.04-03 (LEFT LANE CLOSURE)	STANDARD NO. MD-104.02-13 (INTERSECTION FLAGGING OPERATION)
STANDARD NO. MD-104.04-05 (RIGHT LANE CLOSURE)	STANDARD NO. MD-104.04-13 (LEFT TURN BAY CLOSURE)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. CORREN JOHNSON
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

MR. TOM FOUNTAIN
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
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MR. VICTOR GRAFTON
DISTRICT UTILITY ENGINEER
PHONE: (301) 513-7350

MS. ANYESHA MOOKHERJEE
ASSISTANT DISTRICT ENGINEER - TRAFFIC (MONTGOMERY)
PHONE: (301) 513-7404

MR. KAMAL HAMUD
TEAM LEADER, TRAFFIC SIGNALS
MONTGOMERY COUNTY DOT - DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS
PHONE: (240) 777-8761

MR. BOB RICKETTS
MONTGOMERY COUNTY SIGNAL SHOP
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MR. EDWARD RODENHIZER - OOTS
CHIEF, SIGNAL OPERATIONS SECTION
PHONE: (410) 787-7650

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PHASE 1 + 6	G	G	G	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 + 6 CHANGE	G	G	Y	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 + 6	G	G	G	G	G	R	R	R	R	R	FLDW	FLDW	FLDW	FLDW	DW	DW	DW	DW
PED CLEARANCE	G	G	G	G	G	R	R	R	R	R	FLDW	FLDW	FLDW	FLDW	DW	DW	DW	DW
2 + 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 7	R	R	R	R	R	R	R	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 AND 7 CHANGE	R	R	R	R	R	R	R	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 8	R	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 AND 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 8 ALT.	R	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEARANCE	R	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	FLDW	FLDW	FLDW	FLDW
4 + 8 ALT. CHANGE	R	R	R	R	R	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FLR	FLR	FLR	FLR	FLR	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

CATEGORY CODES	QUANTITY	DESCRIPTION
120500	1 L.S.	MAINTENANCE OF TRAFFIC
114280	580 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
203030	4 C.Y.	TEST PIT EXCAVATION
585621	645 L.F.	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	125 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
801004	7 C.Y.	CONCRETE FOR SIGNAL FOUNDATION
801106	34 L.F.	WOOD SIGN SUPPORTS 4 INCH X 6 INCH
802501	240 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805125	140 L.F.	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805155	60 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED
811001	1 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813014	22 S.F.	INSTALL GROUND MOUNTED SIGN
813015	76 S.F.	INSTALL OVERHEAD SIGN
818004	7 EACH	10 FOOT BREAKAWAY PEDESTAL POLE
837001	4 EACH	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
860292	7 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
861105	1160 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
800000	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
800000	8 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION
800000	1 EACH	2-WIRE CENTRAL CONTROL UNIT
800000	3 EACH	VIDEO DETECTION CAMERA AND CABLE



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 410 (Burlington Ave/Philadelphia Ave) and Fenton Street
Silver Spring, Maryland

GENERAL INFORMATION SHEET

SCALE NONE, ADVERTISED DATE 8/14/2013, CONTRACT NO. M09745377

DESIGNED BY S. Bloss, COUNTY Montgomery
DRAWN BY S. Bloss, LOGMILE 15041004.42
CHECKED BY N. Leary, TMS NO. M045
F.A.P. NO., TOD NO.

TS NO. 143A, DRAWING TSP-3 OF 5, SHEET NO. 3 OF 5

WR&A
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